



## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference FKU-263PCT	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/JP2003/005173	International filing date (day/month/year) 23 April 2003 (23.04.2003)	Priority date (day/month/year) 23 April 2002 (23.04.2002)
International Patent Classification (IPC) or national classification and IPC C08J 5/18, 7/04, B32B 27/30, B65D 1/09, B65D 30/02, 65/02, 65/40 // C08L 33:02, 35:00		
Applicant KUREHA CHEMICAL INDUSTRY COMPANY, LIMITED		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 4 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 3 sheets.

3. This report contains indications relating to the following items:

- I  Basis of the report
- II  Priority
- III  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV  Lack of unity of invention
- V  Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI  Certain documents cited
- VII  Certain defects in the international application
- VIII  Certain observations on the international application

Date of submission of the demand 04 September 2003 (04.09.2003)	Date of completion of this report 22 December 2003 (22.12.2003)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP2003/005173

## I. Basis of the report

## 1. With regard to the elements of the international application:\*

 the international application as originally filed the description:

pages \_\_\_\_\_ 1-88 \_\_\_\_\_, as originally filed

pages \_\_\_\_\_ , filed with the demand

pages \_\_\_\_\_ , filed with the letter of \_\_\_\_\_

 the claims:

pages \_\_\_\_\_ 2-7, 9-16, 18-44 \_\_\_\_\_, as originally filed

pages \_\_\_\_\_ , as amended (together with any statement under Article 19) \_\_\_\_\_, filed with the demand

pages \_\_\_\_\_ , filed with the letter of \_\_\_\_\_

pages \_\_\_\_\_ 1, 17 \_\_\_\_\_, filed with the letter of 15 December 2003 (15.12.2003)

 the drawings:

pages \_\_\_\_\_ , as originally filed

pages \_\_\_\_\_ , filed with the demand

pages \_\_\_\_\_ , filed with the letter of \_\_\_\_\_

 the sequence listing part of the description:

pages \_\_\_\_\_ , as originally filed

pages \_\_\_\_\_ , filed with the demand

pages \_\_\_\_\_ , filed with the letter of \_\_\_\_\_

## 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item. These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

 the language of a translation furnished for the purposes of international search (under Rule 23.1(b)). the language of publication of the international application (under Rule 48.3(b)). the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

## 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

 contained in the international application in written form. filed together with the international application in computer readable form. furnished subsequently to this Authority in written form. furnished subsequently to this Authority in computer readable form. The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished. The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.4.  The amendments have resulted in the cancellation of: the description, pages \_\_\_\_\_ the claims, Nos. \_\_\_\_\_ 8 \_\_\_\_\_ the drawings, sheets/fig \_\_\_\_\_5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)	Claims	1-7, 9-44	YES
	Claims		NO
Inventive step (IS)	Claims	1-7, 9-44	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-7, 9-44	YES
	Claims		NO

## 2. Citations and explanations

Document 1: EP 1086981 A1 (Kureha Chemical Industry Co., Ltd.), 28 March 2001

Document 2: EP 890432 A1 (Kureha Chemical Industry Co., Ltd.), 13 January 1999

Document 3: JP 9-221571 A (Mitsui Dupont Polychemicals Co., Ltd.), 26 August 1997

Document 4: JP 8-176316 A (Nippon Shokubai Co. Ltd.), 9 July 1996

Document 5: JP 6-107874 A (Mitsui Dupont Polychemicals Co., Ltd.), 19 April 1994

Claims 1-7 and 9-44 involve an inventive step relative to the documents cited in the international search report.

None of the documents discloses the feature of a film for which one of the starting materials used is a polymer which is a homopolymer, copolymer or mixture thereof wherein the monomer units are restricted to at least one selected from a set comprising acrylic acid, maleic acid, methacrylic acid, crotonic acid and fumaric acid.

Moreover, due to the feature whereby the ratio of the quantity of ionic bonds via the polyvalent metal

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relative to the free carboxyl groups, represented by the ratio of the peaks in the infrared absorption spectrum of the film, is at least a set value, the inventions in the present application can be particularly usefully employed for materials for packaging and containers and the like, and particularly those subject to cooking and sterilization and the like, since it enables cheap industrial production of film which has both good gas barrier properties which are not adversely affected under hot water environments, and also the quality of being easily to separate and recover when discarded due to the fact that it is readily dissolved by acids or alkalis.